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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,309	11/14/2003	Nobuhiro Takeda	1232-5209	2114

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EXAMINER	
DURNFORD GESZVAIN, DILLON	
ART UNIT	**PAPER NUMBER**
2622	

NOTIFICATION DATE	DELIVERY MODE
01/14/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTOPatentCommunications@Morganfinnegan.com
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Office Action Summary	Application No.	Applicant(s)	
	10/714,309	TAKEDA, NOBUHIRO	
	Examiner	Art Unit	
	Dillon Durnford-Geszvain	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 December 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. Claims **1-4** are pending and claim **1** has been amended.

Response to Arguments

2. Applicant's arguments filed 12/10/2007 have been fully considered but they are not persuasive.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., adjusting a reference voltage without transferring signal charges of photoelectric conversion elements while charge accumulation is executed in the photoelectric conversion elements) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The claim merely recites "inputting the reference voltage from the reference power supply to the other terminal of the capacitor by controlling the switch." This is disclosed by Harada, see Column 4 lines 16-28. The Examiner does not find anywhere in the claim where the reference voltage is adjusted, it is merely inputted and does not change.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims **1-4** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. The term "stable" in claim **1** is a relative term which renders the claim indefinite. The term "stable" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The claim as amended recites the limitation "to provide stable clamping operation." It is unclear from the claim or the specification how stable the clamping operation has to be to be considered stable. The specification refers to stable clamping and unstable clamping but fails to delineate where the line is between the two.

Claims **2-4** are indefinite because they depend from an indefinite claim.

Claim Rejections - 35 USC § 103

6. Claims **1-4** rejected under 35 U.S.C. 103(a) as being unpatentable over US 6,211,915 (Harada) in view of 2002/0039144 (Yamada).

As to claim **1**, Harada teaches an image sensing apparatus (see Fig. 4) comprising:

an image sensing element 10 having a photoelectric conversion portion at which a plurality of photoelectric conversion elements (11 and 12) are two-dimensionally arrayed,

vertical transfer portions 13 which vertically transfer signal charges stored in the photoelectric conversion portion in accordance with a vertical transfer pulse,

a horizontal transfer portion 14 which horizontally transfers signal charges transferred from the vertical transfer portions in accordance with a horizontal transfer pulse, and

a charge detection portion 15 which converts signal charges transferred from the horizontal transfer portion into a signal voltage or a signal current;

a switch 19 which inputs a reference voltage from a reference power supply E2; and

a driving circuit which inputs to one terminal of a capacitor 20 a reset voltage that resets the charge detection portion, and inputs the reference voltage from the reference power supply to the other terminal of the capacitor by controlling said switch 19, wherein the charge detection portion and said switch are arranged at the two terminals of the capacitor (see Fig. 4 and Column 4 lines 16-28), and

wherein the reset of the charge detection portion by the driving circuit is continued during the draining of unnecessary charges (Column 5 lines 23-31, wherein the charges are excess charges due to clipping) to provide stable clamping operation (note that this limitation is considered an intended use and does not limit the claim).

What Harada does not teach is draining unnecessary charges from the vertical transfer portion. However, Yamada teaches draining unnecessary charges from the vertical transfer portion ([0277]). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the charge

draining of Yamada in the apparatus taught by Harada as this would allow for smear charges to be discharged resulting in less noise.

As to claim **2**, see the rejection of claim **1** and note that Yamada further teaches that to accomplish the charge draining of claim **1**, the device further includes a horizontal drain 45 which drains unnecessary charges is arranged adjacent to the horizontal transfer portion in a vertical direction of the horizontal transfer portion (see Fig. 15), and when unnecessary charges generated at the vertical transfer portions of said image sensing element reaches a predetermined amount (6S) at the horizontal transfer portion, unnecessary charges are drained to the horizontal drain ([0290]).

As to claim **3**, see the rejection of claim **1** and note that Yamada further teaches that to accomplish the charge draining of claim **1**, while signal charges are stored in the photoelectric conversion portion (note that not all pixels are read out in the apparatus of Yamada, [0282]), the vertical transfer portions are driven at high speed to drain unnecessary charges generated at the vertical transfer portions of said image sensing element (they are driven so as to drain smear charges, [0290]).

As to claim **4**, see the rejection of claim **1** and note that Yamada further teaches that to accomplish the charge draining of claim **1**, while signal charges are stored in the photoelectric conversion portion (note that not all pixels are read out in the apparatus of Yamada, [0282]), potentials of the vertical transfer portions are set to the same potential

to drain unnecessary charges generated at the vertical transfer portions of said image sensing element (this is part of the driving method of Yamada, see Fig. 16 and [0283]).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dillon Durnford-Geszvain whose telephone number is (571) 272-2829. The examiner can normally be reached on Monday through Friday 8 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Dillon Durnford-Geszvain 1/4/2007

LIN YE
SUPERVISORY PATENT EXAMINER